

Amendment Under 37 C.F.R. § 1.111  
U.S. Application No. 10/803,898

Attorney Docket No. Q80038  
Art Unit 2817

### **REMARKS**

Claims 1-12 remain in the application, claim 1 having been amended. Applicants note with appreciation the allowance of claims 9-13 and indication of patentable subject matter in claims 3-8. However, reconsideration of the application and allowance of all claims are respectfully requested in view of the above amendments and the following remarks.

The essential feature of claim 1 is the hemicycle-shaped protrusions in the aperture coupling the input and output waveguides to the input and output ends of the cascaded cavity resonators as shown in Fig. 1, and as shown in more detail at 8, 9, 10 and 11 in Fig. 2. Marie (USP 2,999,988) is relied on to teach the same arrangement as has already been acknowledged as prior art in the application, i.e., the basic arrangement of cascaded resonant cavities coupled through apertures to input and output waveguides, but Marie does not teach the hemicycle-shaped protrusions in the coupling apertures.

Tyrell (USP 2,423,130) is relied on to teach the aperture edges having inwardly extending hemicycle-shaped protrusions, shown at 12 and 13 in Figs. 2 and 3. However, the apertures 12 and 13 of Tyrell are different from the claimed aperture in that the Tyrell apertures are curved slots as opposed to a single aperture with multiple inwardly-extending curved sides. Note that the language of claim 1 requires that edges (plural) of each aperture include inwardly-extending hemicycle shaped protrusions. There is no single aperture anywhere in Tyrell which includes plural edges having inwardly-extending hemicycle-shaped protrusions. While it is believed clear enough from the existing claim language, claim 1 has been amended to further clarify this.

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It is submitted that it would not have been obvious to use the apertures of Tyrrell in the structure of Marie, because the Tyrrell apertures are not suitable for coupling the modes of resonance that must be coupled for the Marie structure to operate. More importantly, however, the use of the Tyrrell aperture configuration in the Marie device would not result in the claimed invention, since the Tyrrell apertures do not include the claimed plural inwardly extending hemicycle shaped protrusions.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

Applicants hereby request a one month extension of time to respond to the Office action of September 27, 2004, and authorize the charging of the appropriate extension fee to Deposit

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Account 19-4880. The USPTO is directed and authorized to charge all other required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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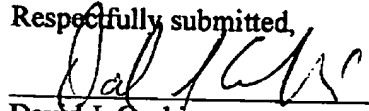
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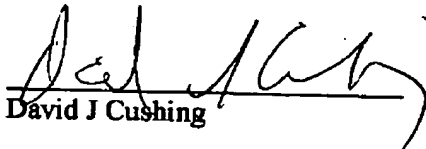
PATENT TRADEMARK OFFICE

Date: January 27, 2005

Respectfully submitted,

  
David J. Cushing  
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I hereby certify that the above document is being transmitted by facsimile to the U.S. Patent and Trademark Office on January 27, 2005.

  
David J Cushing